VACPID Academies

Issue: VACPID initially targeted advanced manufacturing as a career pathway in the south-central and Blue Ridge regions of Virginia. Despite the high number of quality job openings, the pathway had a documented interest and skills gap "One primary reason for the skills gap is an interest gap; when high school students think about their futures, they don't think about manufacturing. In a networked, social word, it's hard for high school students to recognize the power of advanced manufacturing that produces the objects shaping their lives." https://www.staffmanagement.com/advanced-manufacturing-interest-gap/

VACPID response: To address this interest gap, VACPID partnered with the Virginia Manufacturing Association's *Dream it Do it* Academies. Theses academies allowed IWD to participate in the process of creating items from raw materials to finished goods. Over the course of the VACPID, the academies adjusted and expanded to additional pathways based on regional labor market information and populations served.

VACPID's focus on systems alignment shaped the regional academies. Contracts were developed with local workforce systems to develop and host academies in career pathways of interest. Academies were typically held at local community colleges or technical centers. Referrals from partnering agencies was encouraged. Agencies partnered for outreach to employers for tours and/or presentations.

The experiential learning opportunities were viewed by the VACPID as hands on situational assessments, providing students and counselors with the opportunity to see client fitness for entry level careers, and to explore potential next steps on the pathway. Some academies allowed students to see other career/options under one roof (e.g. customer service, sales, IT, HR, Machinist, project managers).

Screenings of individuals for attendance depended upon the academy setting (residential setting may require medical stability and medication independence) and academic demands of the activities (e.g. reading requirements, basic computer literacy). Depending on available referral information, assessments for assistive technology and/or vocational evaluations were provided and documented.

Each academy developed its own agenda and process. Nonetheless, basic concepts were consistent throughout.

- Everyone attending these academies was required to be, or eligible to become, a WIOA or a DARS/DBVI participant. Academies geared toward adults required high school completion. Youth academies would accept students up to one year out of high school.

- Most academies offered participants breakfast, lunch, and snacks.
- Participants were offered tours of businesses and/or employer presentations
- A DARS Counselor attended each camp to administer assessments on all participants and speak about Career Pathways.
- Each academy had a final competition and/or presentation where students demonstrated and/or presented on their efforts.
- Team work was required.
- Activities were geared toward project completion and/or item creation.
- Assistive technology was available for teachers and instructors to sample and use during the academy.

Sustainability:
1. Training opportunities for train the trainer for DARS counselors.
2. Relationships developed with partnering host sites for future academies.
3. Considerations for 1 day academies.

Future Research:
Assessing the impact of academies participants' future career plans.

Resources:

Powerpoint Presentations
- PPT of National Rehab conference: Hot Topic Academies to Attract Youth to Modern Manufacturing
- PPT of national VECAP Presentation: Power of Hand-on Career Exploration

Documents:
- Academy save the date flier
- Robotics application
- Academy report example

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Appendix A: Evolution of the growth of Career Pathways Academies.

2016: In the summer of 2016, VACPID's hosted five academies geared toward advanced manufacturing.

VACPID partnered with VA Career Works South Central Region and Southside Community College to host three academies. These academies were integrated with IWD and students of the VA career works youth program.

Wilson Workforce and Rehabilitation created the water filtration academy which involved a solar powered filtration system (pictures below). They ran a pre-academy with students from WWRC and then a pre-employment transition academy. Students attending this residential academy worked in teams to study the manufacturing process flow and toured a facility to see this process on site. On the final day the students demonstrated what they learned to family and friends by filtering, bottling, labeling and packaging the filtered water.
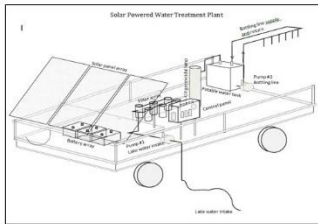
Academies 2016	# Participants	# Days	Partners
Pre – Water Filtration (youth)	8	5	WWRC
Water Filtration (Youth)	11	5	WWRC
Welding (youth)	10	5	VA Career Works South Central Region and Southside Community College
3D Printing (youth)	9	5	VA Career Works South Central Region and Southside Community College
Drone/Robotics (youth)	22	5	VA Career Works South Central Region and Southside Community College

2017: CPID expanded the academies in the second year to include information technology and academies for adults. The previous year's sites were continued in 2017.

Shenandoah Valley Workforce Development Board (SVWDB) hosted two academies. The first was a 3D printing academy adult academy at Dabney Lancaster Community College. This was hosted over a weekend to better fit adult participant's schedules. SVWDB also

partnered with Valley Career and Technical Center for a 5 day Computer Numeric Control academy for young adults.

Virginia Rehabilitation Center for Blind and Vision Impaired partnered with The National Integrated Cyber Education Research Center (NICERC) to develop an accessible curriculum for cyber and robotics. This residential academy combined DARS and DBVI students.

Southwest Virginia Advanced Manufacturing Center and DARS worked on a 3 day manufacturing exploration academy. This academy looked at welding, 3D printing and advanced manufacturing (light saber assembly).

Academy 2017	# Participants	# Days	Partners
3D Printing (youth)	10	5	VA Career Works South Central Region and Southside Community College
Gaming (youth)	10	5	VA Career Works South Central Region and Southside Community College
Welding (youth)	6	5	VA Career Works South Central Region and Southside Community College
3D Printing (adults)	18	3	Dabney Lancaster Community College and Shenandoah Valley Workforce Development Board
Robotics/Cyber (youth)	25	5	VA Rehabilitation Center for the Blind and Vision Impaired and The National Integrated Cyber Education Research Center
Water Filtration (youth)	11	5	WWRC
CNC (youth)	12	5	Valley Career and Technical Center and Shenandoah Valley Workforce Development Board

2018: Several of the same sites continued with academies again in 2018. To accommodate student busy schedules, VACPID worked with Virginia Manufacturing Association on the development of a 1 day academy. This academy was onsite at ITAC and included a solar power assembly, tour, interviews with employees, management and HR.

Academies 2018	# Participants	# Days	Partners
Intro to IT (adult)	14	5	Prince William Skill Source Center and Global Connections for Employment
Welding (adults)	9	5	New Horizons Center and Peninsula Career Works
Intro To Cyber (adults)	14	5	Peninsula Career Works, NICERC and Thomas Nelson Community College

Intro To Cyber (youth)	18	2	Skill source and NICERC
Coding (youth)	22	2	Skill source and NICERC
ITAC (pre-ets)	15	1	ITAC, VA Manufacturing Association
Water Filtration (youth)	9	5	WWRC
CNC (youth)	10	5	Shenandoah Valley Workforce Development Board, VCTC and WWRC
Exploring Welding, 3D Printing and manufacturing (youth)	16	5	SVAM Center of Excellence
Robotics/IT (youth)	22	5	VRCBVI and NICERC
Healthcare Exploration (youth)	13	5	VA Career Works South Central Region and Southside Community College
IT Exploration (youth)	11	5	VA Career Works South Central Region and Southside Community College
Co2 Race Car (youth)	10	5	VA Career Works South Central Region and Southside Community College

2019: Considerations of sustainability led to train the trainer opportunities for DARS/DBVI evaluators, instructors and counselors. Several one-two day academies took shape. Additionally partnerships took place with employers with employees taking a role with instruction.

Academies 2019	# Participants	# Days	Partners
Cyber security analyst (youth)	19	1	DARS, Service Source and NICERC
Coding (youth)	19	2	DARS Fredericksburg, WWRC and NICERC
Coding (youth)	6	2	WWRC and Service Source
VA Science Museum (youth)	4	1	Science Museum, Mobelux and Capital One
York Academy (youth)	15	1	Newport News Shipyard and York River Academy
Welding (adults)	8	5	New Horizons Center and Peninsula Career Works
Intro to IT (Adult)	10	5	Peninsula Career Works and TNCC
IT Exploration (adults)	10	5	Virginia Career Works: Winchester Center
Welding (adults)	9	5	Shenandoah Valley Workforce Development Board and Massanutten Tech Center

Martinsville (youth)	10	1	Eastman, Patrick Henry CC and DARS

2020: Due to COVID 19, academy planning and participation was limited for the last year of the CPID grant. New Horizons offered a welding academy using COVID guidelines that included social distancing and a smaller number of participants. VACPID also worked with Intellectual Point to host a virtual academy in IT.

Academies 2019	# Participants	# Days	Partners
Python (youth)	14	5	Intellectual Point
Welding (adults)	5	4	New Horizons Center and Peninsula Career Works